## **CLAIMS**

## I claim:

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A method for detecting at least one taggant in the packaging material for an article, comprising:

providing the at least one taggant in at least a portion of the packaging material;

causing the at least one taggant to radiate at least one x-ray; and analyzing whether the at least one x-ray has a specific energy.

- 2. The method of claim 1, wherein the packaging material is at least one label.
- 3. A method of analyzing the packaging material for an article, comprising

providing at least a portion of a packaging material on or over a portion of an article;

irradiating the packaging material portion with an energy beam; and analyzing whether the packaging material portion irradiates at least one x-ray with a specific energy.

- 4. The method of claim 3, wherein the packaging material is at least one label.
  - 5. A method for packaging an article, comprising: providing a portion of an article; and

providing at least a portion of a packaging material on or over a portion of the article, the packaging material portion comprising at least one taggant which radiates at least one x-ray when an energy beam is impinged thereon.

- 6. The method of claim 5, wherein the packaging material is at least one label.
- 7. Packaging material for an article, the packaging material comprising at least one taggant which radiates at least one x-ray when an energy beam is impinged thereon.

- 8. The packaging material of claim 7, wherein the packaging material is at least one label.
- 9. A method for manufacturing a packaging material containing at least one taggant, comprising:

providing a component of the packaging material;

adding at least one taggant to the component, the at least one taggant radiating at least one x-ray when an energy beam is impinged thereon; and

combining the tagged component with other components of the packaging material.

10. A method for manufacturing a packaging material containing at least one taggant, comprising:

providing at least a portion of a packaging material; and

adding at least one taggant to the packaging material portion, wherein the at least one taggant radiates at least one x-ray when an energy beam is impinged thereon.

11. A method of manufacturing a packaged article containing at least one taggant, comprising:

providing a portion of an article; and

providing a portion of a packaging material on of over a portion of the article, the packaging material comprising at least one taggant which radiates at least one x-ray when an energy beam is impinged thereon.

- 12. The method of claim 11, wherein the packaging material is at least one label.
- 13. A packaged article containing at least one taggant made by the method comprising:

providing a portion of an article; and

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providing a portion of a packaging material on or over a portion of the article, the packaging material comprising at least one taggant which radiates at least one x-ray when arrenergy beam is impinged thereon.

- 14. The packaged article of claim 13, wherein the packaging material is at least one label.
- 15. An article comprising a packaging material containing at least one taggant which radiates at least one x-ray when an energy beam is impinged thereon.
- 16. The article of claim 15, wherein the packaging material is at least one label.
  - 17. A method of tagging an article with at least one taggant comprising: providing a portion of an article; and

providing a portion of a packaging material on or over a portion of the article, the packaging material comprising at least one taggant which radiates at least one x-ray when an energy beam is impinged thereon.

- 18. The method of claim 17, wherein the packaging material is at least one label.
- 19. A packaging material containing at least one taggant made by the method comprising:

providing a component of the packaging material;

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adding at least one taggant to the component, the at least one taggant radiating at least one x-ray when an energy beam is impinged thereon; and

combining the tagged component with other components of the packaging material.

20. A packaging material containing at least one taggant made by the method comprising:

providing at least a portion of a packaging material; and

adding the at least one taggant to the packaging material portion, wherein the at least one taggant radiates at least one x-ray when an energy beam is impinged thereon.

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